

(No Model.)

2 Sheets—Sheet 1.

J. K. ASHLEY.
BOX MACHINE.

No. 564,240.

Patented July 21, 1896.

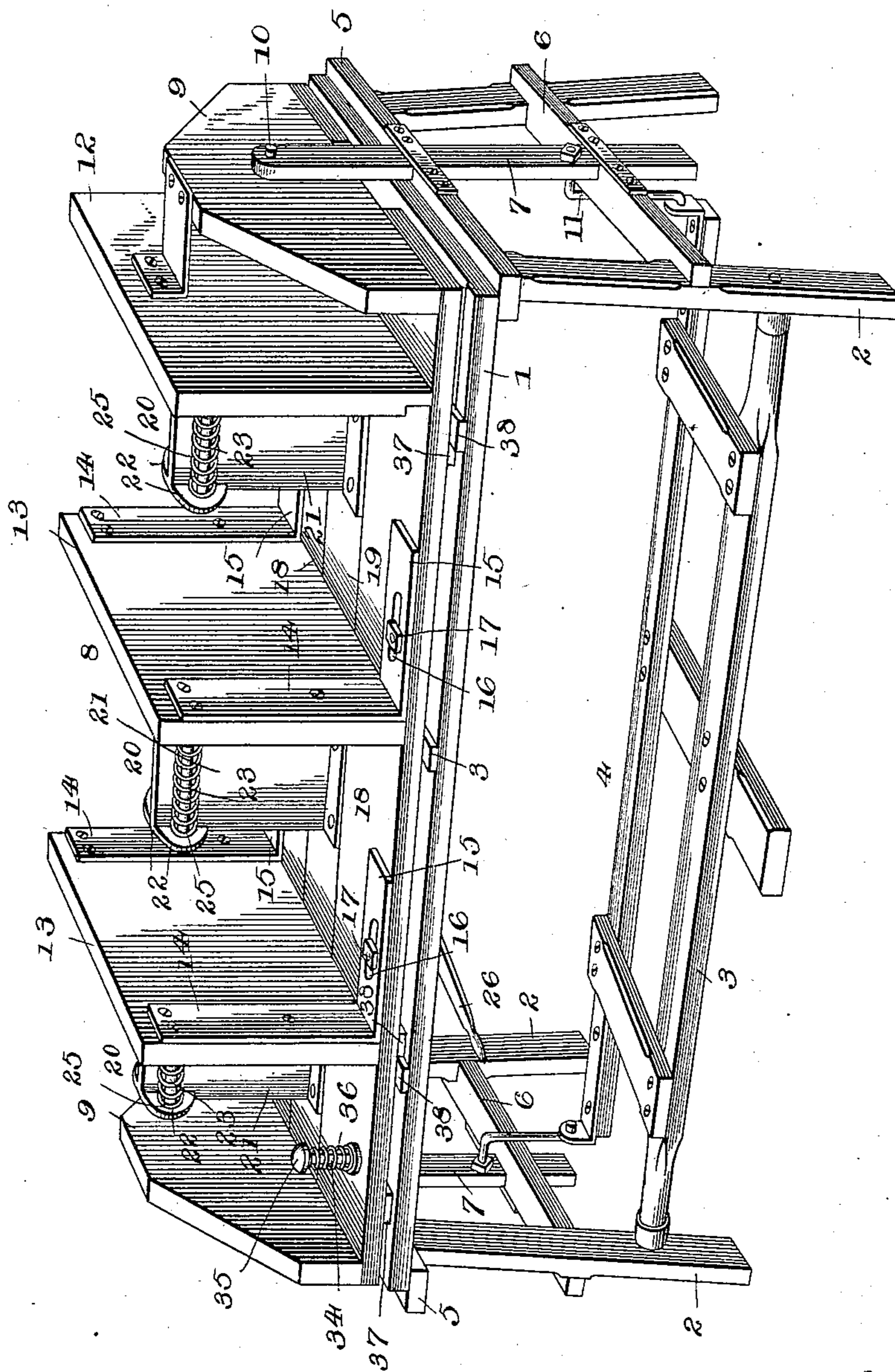


Fig. 1.

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Witnesses

Chas. A. Ford.

By his Attorneys.

E. E. R. R. R.

Chas Snowles

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Fig. 2.

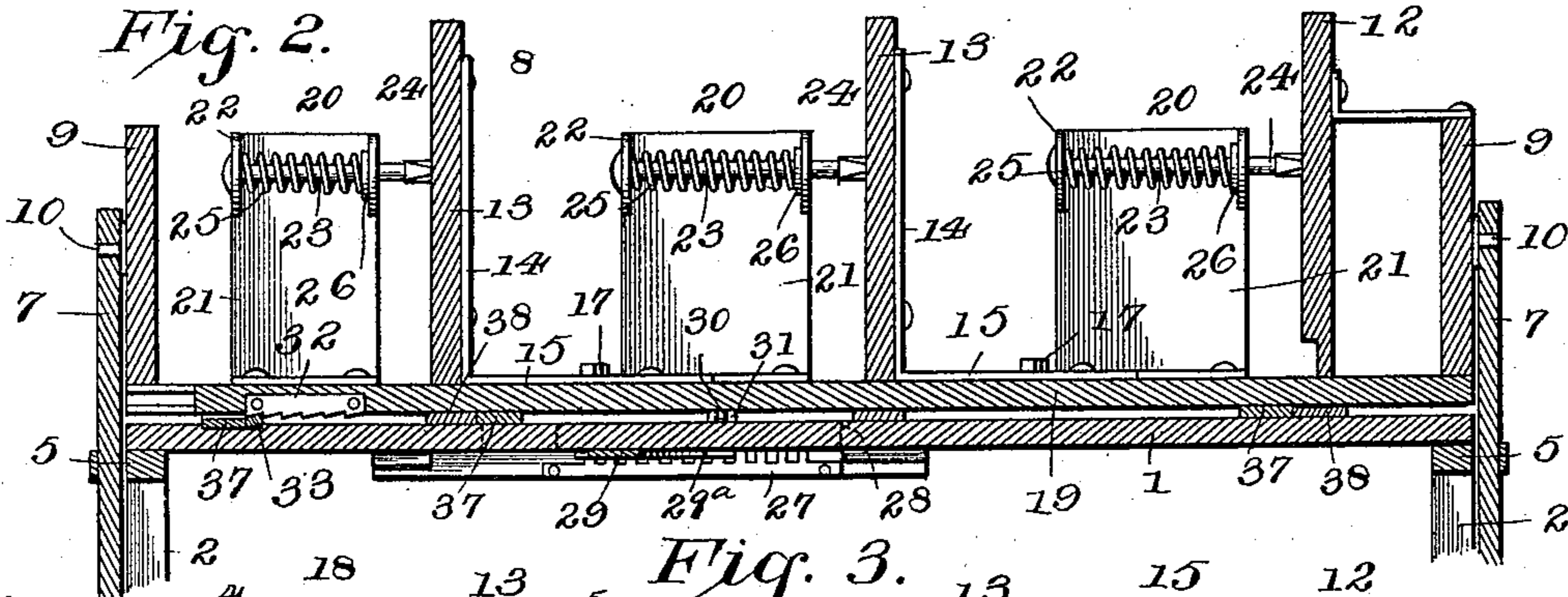


Fig. 3.

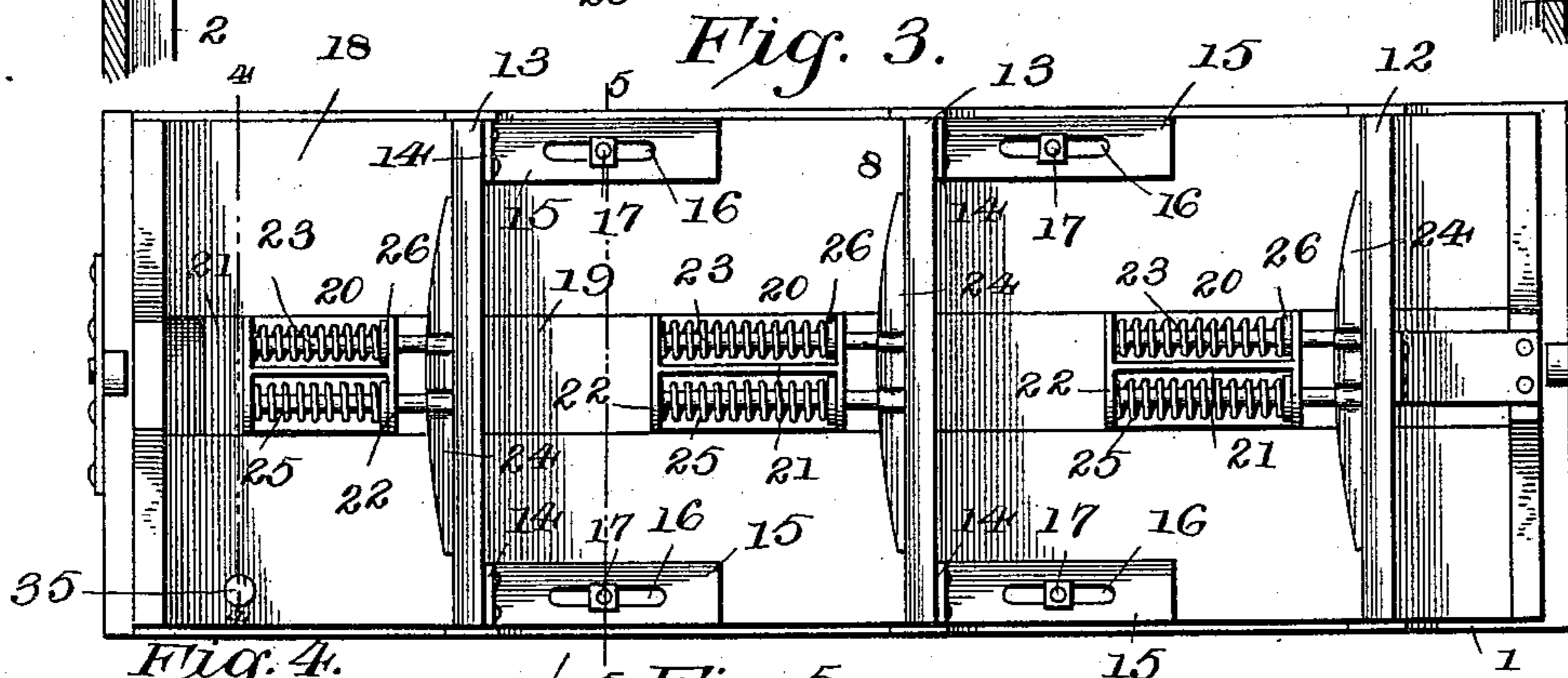


Fig. 4.

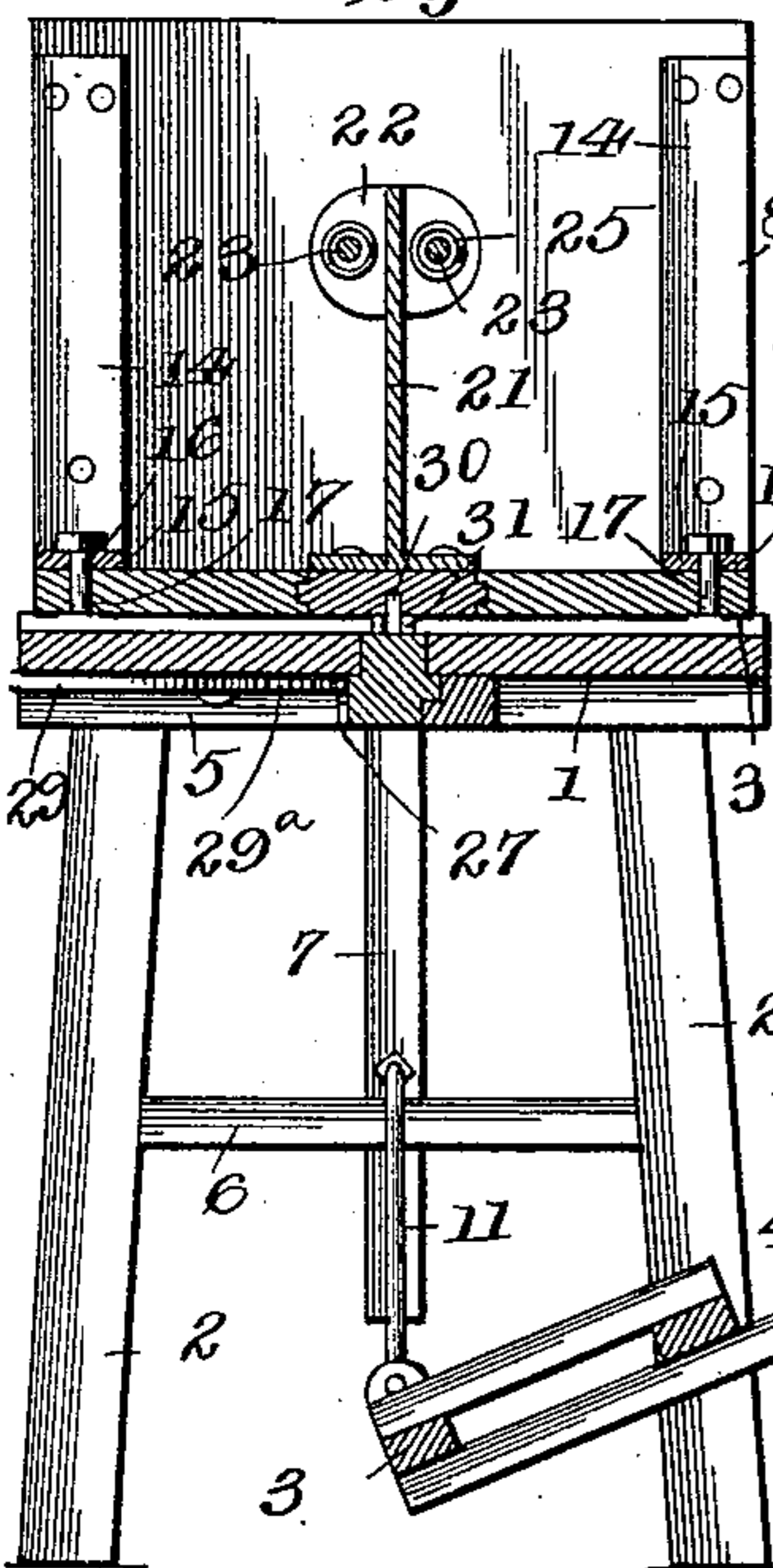


Fig. 5.

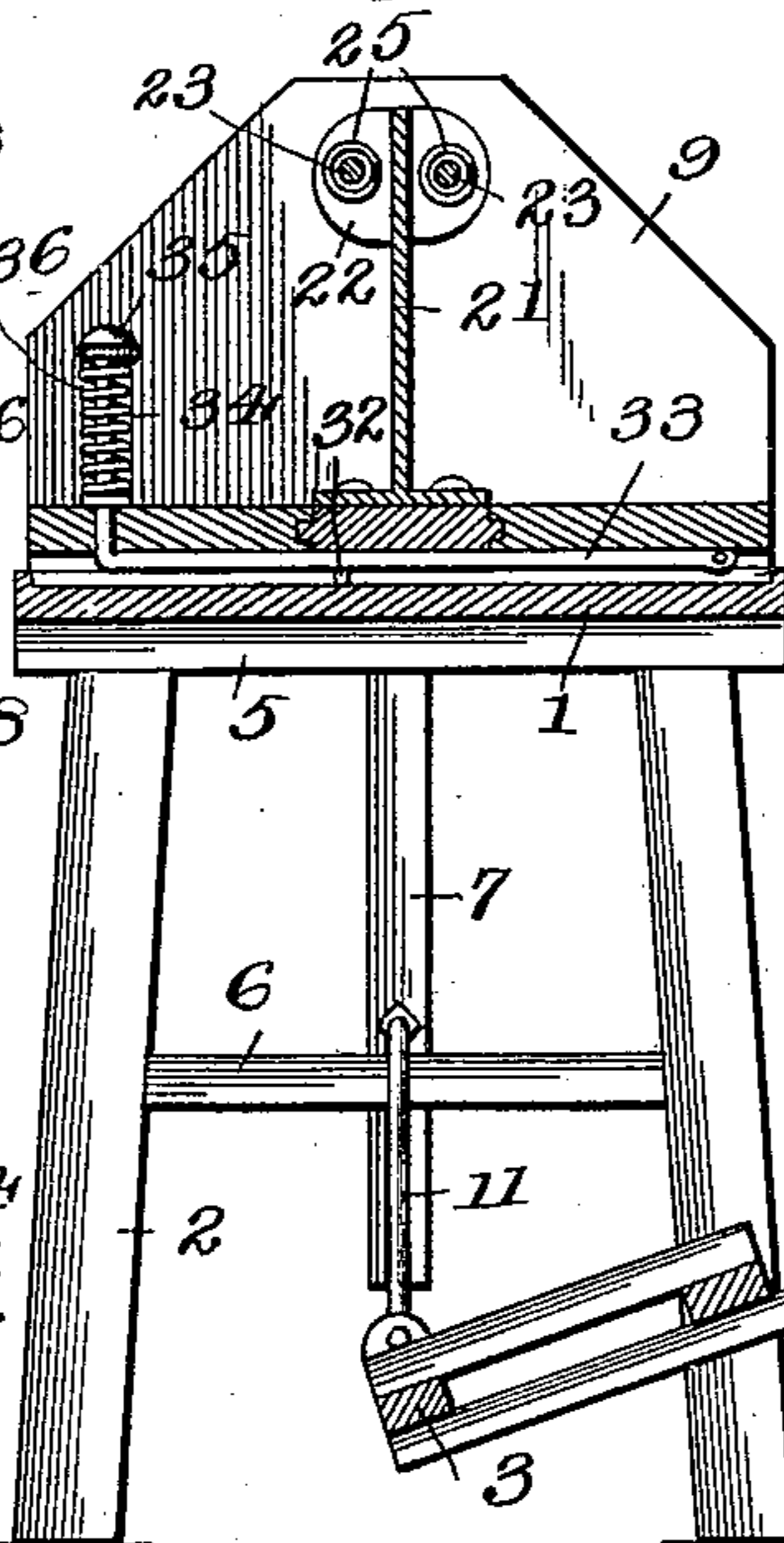
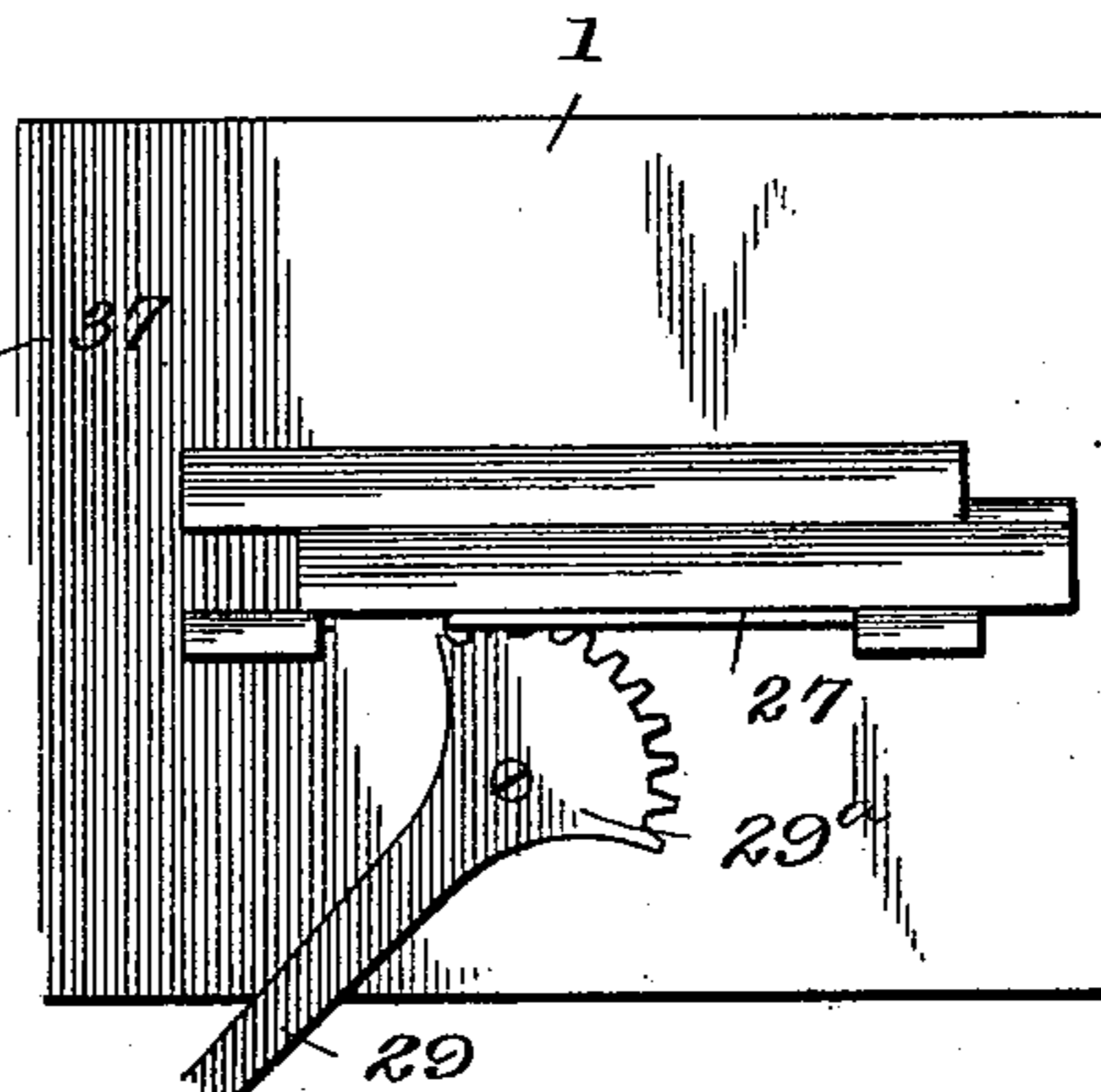


Fig. 6.



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UNITED STATES PATENT OFFICE.

JAMES K. ASHLEY, OF RUSHVILLE, ILLINOIS.

BOX-MACHINE.

SPECIFICATION forming part of Letters Patent No. 564,240, dated July 21, 1896.

Application filed April 29, 1895. Serial No. 547,565. (No model.)

To all whom it may concern:

Be it known that I, JAMES K. ASHLEY, a citizen of the United States, residing at Rushville, in the county of Schuyler and State of Illinois, have invented a new and useful Box-Machine, of which the following is a specification.

My invention relates to box-machines, and has for its object to provide a simple and efficient device adapted for holding the heads of boxes and crates in the desired relative positions during the securing to the edges thereof of the sides and bottom, to provide improved means for varying the intervals between the heads of the boxes or crates, and, furthermore, to provide simple and efficient means for locking the heads of the box or crate in contact with the backing-frames and for varying the tension of the springs whereby pressure of the heads against the backing-frames is controlled.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of a box-machine constructed in accordance with my invention. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a plan view. Fig. 4 is a transverse vertical section on the line 4 4 of Fig. 3. Fig. 5 is a transverse section on the line 5 5 of Fig. 3. Fig. 6 is a partial bottom plan view.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates a table provided with end supports 2, in which are mounted the extremities of the rock-shaft 3, forming a member of a foot-treadle 4. In transverse upper and lower bars 5 and 6, arranged at opposite ends of the table, are mounted vertical slides 7, to the upper extremities of which is fulcrumed the reversible clamp-frame 8, said clamp-frame being provided with end brackets 9, having central longitudinal trunnions 10, fitted in bearings in the upper extremities of the slides. These slides are connected with the foot-treadle by means of links 11, whereby the motion of the latter is communicated to the

slides to elevate the clamp-frame sufficiently to allow it to be reversed or turned to expose different sides of the box or crate in securing the sides and bottom thereof to the heads. 55

Near one end of the clamp-frame is arranged a fixed backing-frame 12, and parallel with this fixed backing-frame are the adjustable backing-frames 13, provided with bracing-brackets 14, having horizontal arms 15, which rest upon the upper surface of the bottom of the clamp-frame. These arms 15 are provided with longitudinal slots 16 for engagement by bolts 17, whereby the backing-frames 13 may be adjusted toward or from the fixed backing-frame 12 to vary the intervals between the heads of the box or crate to be constructed on the machine. 60 65

Mounted in a longitudinal guide 18, formed in the bottom of the clamp-frame, is a slide-bar 19, which carries the clamps 20, one clamp being provided for each backing-frame and the clamps being arranged upon the corresponding sides of all of the frames. Each clamp comprises a supporting-plate 21, secured to the slide and provided with lateral eyes 22, in which are mounted guide-rods 23, a pressure-bar or plunger 24, adapted to bear against the crate-head, and springs 25, coiled upon the rods and bearing against eyes 22 and collars 26, the latter being carried by the rods. 70 80

Pivotaly mounted upon the under surface of the table in operative relation with a sliding rack-bar 27, mounted in a longitudinal slot 28 in the table, is a hand-lever 29, by means of which the rack-bar may be moved longitudinally, said lever having a toothed segment 29^a to mesh with the teeth of the rack-bar. A stud 30 depends from the slide-bar 19 and is adapted to fit between ears 31, projecting upward from the rack-bar. In order to hold the slide-bar in its operative position, I employ a ratchet-bar 32 near one end of the slide-bar and a pivotal latch 33, fulcrumed to the under side of the clamp-frame and adapted to engage the teeth of the ratchet-bar, said latch being provided at its free end with a stem 34, extending upward through an opening in the bottom of the clamp-frame and fitted with a nut or adjustable head 35, between which and the upper surface of the bottom of the clamp-frame is 85 90 95 100

arranged a spring 36 to hold the latch in engagement with the ratchet-bar.

Spacing-cleats 37 are secured to the under side of the bottom of the clamp-frame, and
5 corresponding cleats 38 are secured to the upper surface of the table, whereby the clamp-frame, when in the position indicated in Fig. 1, is elevated sufficiently from the plane of the top of the table to allow the operator to prop-
10 erly secure the sides to the heads of the box or crate.

While the release of the slide-bar by the elevation of the latch reduces the pressure of the clamps against the surfaces of the back-
15 ing-frames sufficiently to allow the box or crate to be withdrawn with facility, it is not necessary that the clamp-plates should be entirely withdrawn from contact with the backing-frames, and it will be seen that after ar-
20 ranging the heads of a box or crate between the clamp-plates and the backing-frames the pressure of the plates may be materially increased to insure the accurate holding of the heads during the application of the sides and
25 bottom.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this
30 invention.

Having described my invention, what I claim is—

1. In a box-machine, the combination with a supporting-table, of a revoluble clamp-
35 frame provided with a plurality of backing-frames, a bar mounted to slide longitudinally upon the clamp-frame, spring-actuated clamps carried by said bar to cooperate with the backing-frames, means carried by the
40 clamp-frame for locking the bar at the desired adjustment, an adjusting-lever mounted upon the supporting-table, and connections between the sliding bar and said adjusting-lever when the clamp-frame is arranged in contact

with the supporting-table, substantially as specified.

2. In a box-machine, the combination with a supporting-table, of a revoluble clamp-frame having spaced backing-frames, a bar mounted to slide longitudinally on the clamp-frame and provided with a depending stud, clamps carried by the bar to bear against the surfaces of the backing-frames, a rack-bar mounted to slide longitudinally on the table and having ears to engage the stud on the slide, a lever for moving the rack-bar longitudinally, the same having a toothed segment to engage the rack-bar, and means for locking the slide-bar in position to secure the desired tension of the clamps, substantially as specified.

3. In a box-machine, the combination with a supporting-table, of a revoluble clamp-frame having spaced backing-frames and means for adjusting the same to vary the intervals therebetween, a slide-bar mounted to move longitudinally in the bottom of the clamp-frame, a hand-lever, connections between the hand-lever and the slide-bar, spring-actuated clamps carried by the slide-bar to cooperate with the backing-frames and hold the heads of boxes or crates in contact therewith, a ratchet-bar carried by the slide-bar, and a latch mounted upon the clamp-frame to engage said ratchet-bar and secure the
7 slide-bar in position to attain the desired tension of the clamps, said latch being provided with a stem terminating in an adjustable head, and having an actuating-spring to normally hold the parts in operative position,
8 substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES K. ASHLEY.

Witnesses:

SEBASTIAN SMITH,
DUNCAN TAYLOR.